

**DEPARTMENT OF NATURAL RESOURCES**  
**SOUTH CENTRAL REGION**  
**FULL AIR COMPLIANCE EVALUATION (FCE) SUMMARY**

<b><u>FID:</u></b> 113125320	<b><u>FCE/SITE VISIT DATE:</u></b> June 20, 2008
<b><u>FACILITY NAME AND LOCATION:</u></b> Madison-Kipp Corporation 201 Waubesa St. Madison, WI 53704	<b><u>SOURCE TYPE:</u></b> <input type="checkbox"/> FOP <input checked="" type="checkbox"/> FESOP <input type="checkbox"/> SOP
<b><u>COUNTY:</u></b> Dane	<b><u>NAICS CODE(S)/DESCRIPTION:</u></b> 3364 - Nonferrous die-casting exc. aluminum
<b><u>INSPECTION PARTICIPANTS:</u></b> Daniel Rosenthal – WI DNR Jim Lenz - MKC, Eng. Svc. Manger. Mark Meunier, MKC, V. P. of HR	<b><u>APPLICABLE AIR PROGRAMS:</u></b> <input checked="" type="checkbox"/> SIP <input checked="" type="checkbox"/> NSPS <input type="checkbox"/> NESHAP/MACT <input checked="" type="checkbox"/> TOXIC

**TOTAL ACTUAL FACILITY EMISSIONS IN TONS/YEAR:**

	<b>TSP</b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>VOC</b>	<b>CO</b>	<b>PM10</b>	<b>HAP</b>
<b>2007</b>	17.91	0.057	11.06	19.32	7.69	17.91	See end of the table
<b>CLASS</b>	A	B	A	A	A	A	SM
<b>ATTAIN?</b>	Attn	Attn	Attn	Attn	Attn	Attn	Attn

**(Data above is from the 2008 emission inventory.)**

HCL 1799 lbs  
Chlorine 59 lbs

**IS FACILITY IN COMPLIANCE WITH ALL WISCONSIN AIR REGULATIONS?** No. The two areas of non-compliance are:

1. Madison Kipp used an emission factor that underreported the amount of chlorine and hydrogen chloride in the air emissions inventory.
2. The door and window plan has on occasion not been followed allowing odors into the neighborhood.

Both of these issues are discussed more fully in the Inspection Field Notes and Discussion section.

**INSPECTOR SIGNATURE:**

/s/ Daniel Rosenthal

**NAME:** Daniel Rosenthal

**TITLE:** Air Management Engineer

**SIGNATURE DATE:**

June 30, 2008

Cc: Martha Makholm – AM/7 (Inspections)  
Tom Roushar – DNR SCR – Fitchburg  
Jennifer Hamill – DNR SCR – Fitchburg  
James Lenz – Madison Kipp  
US Environmental Protection Agency – Region V

**FACILITY INFORMATION**

<b><u>FACILITY CONTACT:</u></b> Jim Lenz, Eng. Svc. Manger	<b><u>FACILITY CONTACT PHONE/EMAIL:</u></b> (608) 242-5217 jlenz@madison-kipp.com
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**FACILITY DESCRIPTION:**

Madison-Kipp Corporation operates a facility at 2824 Atwood Avenue where aluminum is melted, alloyed, damaged, drossed, degassed, and finally cast in aluminum die casters. The facility at Atwood Avenue operates two aluminum melt furnaces - RCI 1 and RRI 2 furnace in which drossing and damaging operations (removal of magnesium with chlorine gas) is performed. Degassing of aluminum is accomplished at a station which is vented to a baghouse. This baghouse vents back into the factory. Molten aluminum is then transported via ladle to die casters for casting. Die lube is used for the casting process. The die lube is sprayed on the casting machine in order to be able to remove the casting from the die. The die lube is the main source of VOC emissions from the facility.

Madison-Kipp operates a 2,000 KW output distillate fuel oil generator at the Atwood building.

The Atwood facility operates 4 small cold cleaners for equipment maintenance.

The building labeled Fair Oaks Facility (FOF) is located on contiguous property at 166 South Fair Oaks Street. The FOF facility operates one RCI furnace which is primarily used to remelt the plant runaround generated at the facility. Degassing of aluminum is accomplished at a station which is vented to a baghouse. Molten aluminum is then transported via ladle to die casters for casting. Die lube is used for the casting process. The FOF facility operates 3 small cold cleaners for equipment maintenance.

Both facilities have machining and sub assembly operations.

**POINT/PROCESS DESCRIPTION:**

**S17 P35 - RCI 1:** Reverberatory Aluminum Melt Furnace #1 W/chlorine damaging, installed in 1990, 4.0 TPH maximum aluminum charge rate.

**S16, P36 - RCI 2:** Reverberatory Aluminum Melt Furnace #2 W/chlorine damaging, installed in 2000, 4.0 TPH maximum aluminum charge rate

**S07, P45 FOF RCI furnace #12:** Reverberatory Aluminum Melt Furnace, 4.0 TPH maximum. There is no fluxing or damaging in this furnace and chlorine is not used in this furnace.

**S19, P40 :-** This process includes 17 aluminum die cast machines, natural gas and electric holding furnaces and degassing and grit blast operations. The degassing and grit blasting operations vents through a baghouse that exhausts back into the facility and is not an air emission source. The process was installed in 1971, modified 1996. This process is located at the Atwood Avenue site.

**S50 P50 :** 4 cold cleaners that are serviced by Safety-Kleen and use virgin solvent.

**S23, B23 :** 2000 KW Caterpillar model 3516B electric generator - completed installation 2002. The only allowable fuel in this generator is distillate oil.

**S05, P05:** - This process includes 7 aluminum die-casting machines located at the FOF Facility. There are also degassing and grit blast operations that vent through a baghouse. The baghouse vents back into the facility and is not an air emission source.

**PERMIT(S) & EXEMPTION(S) ISSUED SINCE 2000:**

Permit No.	Issue Date	Purpose of Permit	Expiration Date
07-BAP-002	03/20/2007	Revision of permit 05-BSP-288 to increase particulate limit , lower time between charging plant run around and start of chlorine injection and renewal of Operation permit 113014220-P01. <i>This is the governing permit for the facility and is the basis for the June 20, 2008 inspection and the Compliance Outline Table in the next section of the report.</i>	N/A
05-BSP-288	09/15/2005	Air Pollution Control Construction Permit exemption letter to construct and operate 2 die casters	N/A
04-JLH-301	12/16/2004	Research & Testing Exemption to test a new low VOC die-lube.	11/16/2005
03-POY-328	4/26/2004	Air Pollution Control Construction Permit to modify and operate two aluminum furnaces (RCI 1 and RCI 2) for processes P35 (100 feet stack S17) and P36 (100 feet stack S16).	Revoked at the request of the permittee.
03-BSP-252	10/02/2003	Research and Testing Exemption to operate RCI furnace while simultaneously charging scrap and injecting chlorine.	Total of 6 hours of testing
N/A	7/30/2002	Air Pollution Control Construction Permit exemption letter to construct and operate 2 die casters	N/A
113014220-P01	5/10/2001	Air Pollution Control Operation Permit to operate an aluminum and zinc die-casting facility.	5/10/2006
00-BSP-929	12/20/2000	Air Pollution Control Construction Permit to construct and operate a 2000 KW Caterpillar model 3516B electric generator	12/20/2003
99-BSP-912	12/8/2000	Air Pollution Control Construction Permit to modify and revise operations of Stacks S17, S18, S19, S22 Process P34, P35, P40.	12/8/2003
00-BSP-944	12/8/2000	Air Pollution Control Construction Permit to construct and operate S16, P36 aluminum furnace with chlorine injection.	12/8/2003
N/A	4/20/2000	Air Pollution Control Construction Permit exemption letter to construct and operate a one ton per hour aluminum melt furnace fired on natural gas/propane.	N/A

In addition to the above, the Department's tracking system lists the following: 89-JFH-402; 92-DCF-137; 93-DCF-016; 93-DCF-016-OP; 95-MWH-027; 95-MWH-027-OP; 03-POY-328-OP; 113014220-P02; 95-MWH-042; 97-POY-071; 97-POY-071-R1; 98-JMS-907; 99-BSP-925.

Air Pollution Control Construction Permit #03-POY-328 was issued 4/26/2004 to modify and operate two aluminum furnaces (RCI I and RCI II) for processes P35 (100 feet stack S17) and P36 (100 feet stack S16). Permit Revoked 5/3/2006 at the request of the facility.

**COMPLIANCE OUTLINE**

<b><u>COMPLIANCE OUTLINE</u></b>				
<b>SOURCE</b>	<b>POLLUTANT</b>	<b>LIMITATION</b>	<b>COMPLIANCE DEMONSTRATION</b>	<b>COMPLIANCE STATUS</b>
S17/ P35 – RCI 1 & S16/ P36 – RCI 2 Reverberatory Aluminum Melt Furnace	Particulate	3.65 lbs/hr	The only fuel that can be used is natural gas	Compliance
			Only clean charge, customer returns and internal scrap can be used. Training for employees on types of charge that are allowable	Compliance
		Stacks at least 100 ft above ground level, max. dia. 2.6 ft, no flow obstruction e.g. . rainhats	Technical drawings kept on site	Compliance
	Visible emissions	20%	Same as for particulate emissions	Compliance
	Chlorine	Usage rate for chlorine not more than 35 pounds/hr.	Continuous monitoring of chlorine rate into furnace	Compliance
		Chlorine used only when the magnesium content is greater then 0.10% by wt. If charge has less then 0.10% magnesium then no chlorine may be used	Analytical test and records of magnesium once every 4 hrs when chlorine used	Compliance
		Only 1 furnace can use chlorine at any one time.	Record keeping	Compliance
		Furnace temperature must not be below 1335 °F when chlorine used	Temperature recording	Compliance
		Emission limited to 0.83 tons/mo	Monthly calculation using emission factor (ef) from most recent stack test . EF is now 0.034 lb chlorine emitted/lb of chlorine used	Non-Compliance (see # 3 in the next section of the report)

**COMPLIANCE OUTLINE**

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS
		Chlorine may not added when recirculation pump is not drawing 9 amps or more	Record keeping	Compliance
		Chlorine may not be added when metal level is more than 7 inches down from full	Record keeping	Compliance
		Nitrogen will not be added when chlorine is being used	Record keeping	Compliance
	Hydrogen Chloride (HCl)	0.83 tons/mo	Monthly calculation and record keeping using emission factor (ef) from most recent stack test . EF is now 0.205 lb HCl emitted/lb of chlorine used	Non-compliance (see note # 3 in the next section of the report)
	Aluminum Soluble Salts	3.2 lbs/hr	Same compliance demonstration as for chlorine	Compliance
	TCDD (2,3,17,8 Tetrachlorodibenzo p-dioxin) as equivalents	0.0001 pounds per year	Monthly calculation and record keeping using emission factor (ef) from most recent stack test	Compliance
		Chlorine injection must stop 1 minute or more before charging material other than aluminum T-bar, sow, ingot, billet, pig and alloying elements. (The other material is usually plant internal runaround)	Real time process controller on chlorine injection	Compliance
		Chlorine injection may not start until other material has been charged for at least 3 minutes	Record keeping of when plant runaround is charged into furnace	Compliance

**COMPLIANCE OUTLINE**

<b>SOURCE</b>	<b>POLLUTANT</b>	<b>LIMITATION</b>	<b>COMPLIANCE DEMONSTRATION</b>	<b>COMPLIANCE STATUS</b>
<b>B23/S23 2000 kw Caterpillar generator</b>	Particulate emissions	0.15 lbs/MMBtu 2.60 lbs/hr (whichever is lower)		
		Stacks at least 50 ft above ground level, max. dia. 1.25 ft, no flow obstruction e.g. . rainhats	Technical drawing	Compliance
		Only distillate oil used	Record keeping	Compliance
		Engine will be calibrated and maintained to peak performance every 500 hrs of operation or 1 per year whichever comes first	Record keeping	Compliance
	Nitrogen Oxide	51.62 lbs/hr  Only distillate oil used and limited to 833 gallons per month averaged over any 12 consecutive month	Record keeping	Compliance
<b>S07/P45 Reverberatory Aluminum Melt furnace</b>	Particulate matter	1.80 lb/hr		
		Stacks at least 75 ft above ground level, max. dia. 2.76 ft, no flow obstruction e.g. . rainhats	Technical drawings	Compliance
		Only natural gas can be used	Plans and specs to show fuels that can be used	Compliance
		Only clean charge, customer returns or internal scarp can be used	Operator training	Compliance
		No fluxing or damaging allowed in this furnace	Sign in area to show this limitation	Compliance

**COMPLIANCE OUTLINE**

<b>SOURCE</b>	<b>POLLUTANT</b>	<b>LIMITATION</b>	<b>COMPLIANCE DEMONSTRATION</b>	<b>COMPLIANCE STATUS</b>
	Visible emissions	20 %  Only natural gas can be used	Record keeping	Compliance
<b>S19/P40Aluminum Die casting</b> 17 die casting machines, natural gas and electric holding furnaces, degasser and grit blaster vent also vent through S 19	Volatile organic compounds	LACT (latest available control techniques) for the operation of aluminum die casters is defined as the use of "low VOC" die lube. "Low VOC" die lube for this process is defined as: (a) the water content of the die lube, as received, may not be less than 75% by weight, and (b) The die lube, as applied, shall be diluted to a ratio of at least 55 parts of water to one part die lube (by volume). (c) As an alternative to (a) and (b), the lubricant blend portion of the die lube shall be diluted at a ratio of at least 223 parts water by volume to one part lubricant blend (by volume).	Madison Kipp Corp. shall keep and maintain on site a current material safety data sheet (MSDS) or equivalent for the die lube.  Madison Kipp Corp. shall keep and maintain on site a calibration and maintenance log for the mixing equipment.	Compliance
			If the alternative LACT of is used, Madison Kipp Corp. shall record, the amount of die lube material used, the total amount of water added to the mix, and the dilution ratio of the parts of water (by volume) to the parts of lubricant blend (by volume) shall be calculated and recorded.	Compliance
	Particulate matter	7.76 lbs/hr  Only natural gas or electricity may be used in the holding furnaces	Technical plans on site	Compliance
		Stack for winter – S19/B2,C2,D2,F2 Stacks at least 76 ft above ground level, max. dia. 5.76 ft, no flow obstruction e.g. . rainhats Stack for summer – S19/B1,C1,D1,E1 B2,C2,D2,F2 Stacks at least 76 ft	Technical plans on site	Compliance

**COMPLIANCE OUTLINE**

<b>SOURCE</b>	<b>POLLUTANT</b>	<b>LIMITATION</b>	<b>COMPLIANCE DEMONSTRATION</b>	<b>COMPLIANCE STATUS</b>
		above ground level, max. dia. 5.76 ft, no flow obstruction e.g. . rainhats  LACT for VOC will control condensable emissions  Aluminum throughput not more than 200,000 pounds per day  No fluxing except for furnace cleaning	See above for VOC  Record daily throughput Record operating scenario ( summer or winter) Record most recent emission factor Calculate daily emissions	Compliance  Compliance Compliance Compliance
	Visible emissions	20%	Same as particulate emissions	Compliance
<b>S05/P05</b> <b>Aluminum Die</b> <b>Casting</b> 7 die casting machines located at FOF location , Degasser and grit blaster	Volatile organic compounds	Same limitations as S19/P40 above	Same compliance demonstration as S19/P40 above	Compliance
	Particulate matter	5.81 lbs/hr  Stack for winter – S05A Stacks at least 81 ft above ground level, max. dia. 5.76 ft, no flow obstruction e.g. . rainhats Stack for summer – S05 A,B,C Stacks at least 76 ft above ground level, max. dia. 5.76 ft, no flow obstruction e.g. . rainhats  LACT for VOC will control condensable emissions  Aluminum throughput not more than 150,000	Keep technical drawings on site  Same as for VOC above  Record daily throughput Record operating	Compliance  Compliance Compliance



### **COMPLIANCE OUTLINE**

<b>SOURCE</b>	<b>POLLUTANT</b>	<b>LIMITATION</b>	<b>COMPLIANCE DEMONSTRATION</b>	<b>COMPLIANCE STATUS</b>
		pounds per day  No fluxing except for furnace cleaning	scenario ( summer or winter) Record most recent emission factor Calculate daily emissions	Compliance Compliance
	Visible emissions	20%	Same as particulate emissions	Compliance
<b>P50 Cold cleaners</b>	Volatile organic compound	Provide cover  Spray must be a stream not a mist  Close cover when parts are not be handled  Drain parts for at least 15 seconds or until dripping ceases  Keep waste solvent in closed containers  Repair leaks	Record of solvent being used  Records of operator training.	Compliance  Compliance
<b>Entire facility</b>	Malodorous Emissions	Minimize malodorous emissions	Prepare and follow a door and window plan  Door and windows to be closed except when transferring material and to provide a safe working environment	Non- compliance  Non –compliance (see note # 7 in the next section of the report)
	Hazardous Air Pollutants	0.83 tons/ month for any single Federally listed HAP  2.08 for all Federally listed HAPs	Monthly record keeping	Compliance  Compliance

**FACILITY REPORTING REQUIREMENTS:**

Requirement		Frequency and/or Due Date	Compliance Status
Annual compliance certification		Annual	compliance
Emissions Inventory		Annual	compliance

**RESULTS OF PREVIOUS FCEs/SITE VISITS:**

FCE/Site Visit Date	Result	Comments
06/13/2005	Compliance	None.
03/20/2007	Compliance	None

**RESULTS OF PREVIOUS EMISSION TESTS:**

Source	Test Date/Year	Pollutant(S)	Emission Limit	Result	Comments
RCI-2 Melt furnace S17 or S16?	9/25/07	Total Dioxin	0.0001 lb/yr	$2.18 \times 10^{-8}$ lbs/hr $1.66 \times 10^{-9}$ lb/lb $Cl_2$ introduced	Using this emission factor along with the annual usage of chlorine the facility is able to demonstrate compliance with the TDD limit.
S17, P35	10/24-25/03	PM	1.51 lbs/hr	3.00 lbs/hr	Non-Compliance - Applied and granted new limit of 8.5 lbs/hr
		Aluminum Soluble Salts	0.672 lb/hr	0.620 lb/hr	Compliance - Applied and granted new limit of 2.0 lbs/hr
		HCL	22.6 lbs/hr	12.7 lbs/hr	Compliance
		Chlorine	62 lbs/hr	2.1 lbs/hr	Compliance
		Total Dioxin	0.0001 lb/yr	0.0025 lb/yr	Compliance - even though the test results appear to show an exceedance of limit based on 8760 hrs/yr, the facility never exceeded annual limit. The facility also never exceeded annual limit based on the emission factor for dioxin emissions per pound of chlorine and amount of chlorine used. The facility is operating with 5-minute separation between chlorine injection and internal scrap introduction to the furnace and maximum 35 lbs/hr chlorine injection. The test was done without 5 - minute separation. A previous test with 5 - minute separation and maximum 35 lbs/hr chlorine injection results in compliance with the annual limit.
		Opacity	20%	0.47%	Compliance
S23, B23	5/3/02	PM	2.275 lbs/hr	1.995 lbs/hr	Compliance
		NOx	102.9 lbs/hr	26.06 lbs/hr	Compliance
S16, P36	5/4-5/01	HCL	22.6 lbs/hr	5.474 lbs/hr	Compliance
		Chlorine	35 lbs/hr	0.177 lb/hr	Compliance
		Aluminum Soluble Salts	0.672 lb/hr	0.187 lb/hr	Compliance
		Total Dioxin	0.0001 lb/yr	0.000003 lb/yr	Compliance

**SUMMARY OF PREVIOUS COMPLAINTS:**

Complaint Date	Complaint Description	Follow-Up Action	Comments
2007	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2006	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2005	2 - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2004	4 - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2003	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2002	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2001	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2000	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.

**SUMMARY OF PREVIOUS ENFORCEMENT ACTIONS:**

Action Date	Action Type	Nr Code Cited	Resolved [Y/N]	Comments
2/2/2004	NOV	exceedance of 1.51lbs PM/hr limit during a stack test	Y	The facility applied for and received a modification to the permit to increase the particulate matter emissions limit on the furnaces to 8.5 pounds per hour as allowed by the Wisconsin Administrative Code. The Notice of Violation was closed out on 10/5/2004.

**INSPECTION FIELD NOTES AND DISCUSSION**

1. One of the large propane tanks has been removed from the facility and the second tank is in the process of being removed. Two small tanks that remain are only used for fueling fork lift trucks.

2. Madison Kipp has been using less chlorine in then in the past. This is due to 3 factors:

- The auto industry has raised the allowable amount of magnesium in the die castings from 0.1% to 0.3%.
- Lower magnesium aluminum has become more economical to purchase.
- The auto industry has had a lower demand than in the past. Furnace RCI 1 has been shut down since the end of 2006. Previously RCI 2 was shut down for approximately 3 years. Madison Kipp has been running one furnace at Atwood Av.

Madison Kipp has lowered the amount of chlorine storage due to the lower usage of this gas. Previously the had a storage capacity of 6,000 pounds; the storage capacity now is 1,300 pounds

3. Madison Kipp used an older emission factor for calculating and recording their Chlorine (Cl<sub>2</sub>) and Hydrochloric Acid emissions (HCl). This was corrected by the facility after documentation was asked for the emission factors they used. The using of older/lower

emission factor resulted in an under reporting of the emission to Annual Emission Inventory. The difference between the calculated emissions using these different emission factors is summarized in the table below:

<b>Chlorine used in 2007 8,279.692 pounds</b>		
	<b>Cl<sub>2</sub> emissions (lbs/year)</b>	<b>HCl emissions (lbs/year)</b>
Older EF used by Kipp 0.0059 lbs Cl emitted/lb of Cl <sub>2</sub> used 0.1825 lbs HCl emitted/lb of Cl <sub>2</sub> used	48.8	1,511
Newer EF in Permit 0.034 lbs Cl emitted/lb of Cl <sub>2</sub> used 0.205 lbs HCl emitted/lb of Cl <sub>2</sub> used	281.5	1,697

4. Madison Kipp shows compliance with the Aluminum Soluble Salt limit via an emission factor from a stack test. The stack showed emissions of 0.0062 pounds of salt per pound of chlorine used. The permitted maximum chlorine usage is 35 pounds per hour. According to Jim Lenz the process controller is set at 32 pounds per hour. The maximum amount of aluminum salt would then be:

0.0062 pounds of Al salt/lb of chlorine x 35 pounds of chlorine/hour = 0.22 lb Al salt/hour.

5. The dioxin limit is demonstrated via a stack test. According to the most recent stack test the facility had emissions of  $1.66 \times 10^{-9}$  lb of dioxin per pound of chlorine used.

Hence:

$1.66 \times 10^{-9}$  lb of dioxin / chlorine used. X 8,279.692 lbs of chlorine used in the last 12 months = 0.0000137 lbs dioxin /last 12 months

6. Madison Kipp uses the alternative compliance method for limiting VOC emissions from their die lubes. They use the compliance method where the die lube will be diluted to no greater than 1 part lubricant to 223 parts of water.

The die lube system is set up with three separate blending tanks. Each die casting machine is connected to two blending tanks but only draws from one tank at a time. Depending on the physical characteristics of the casting being manufactured different strengths of the die lubes are required. Thicker casting with a consequent greater heat retention require a lubricant that is less diluted with water.

The three tanks have the following dilution ratios: 223:1, 302:1, 360:1. The die lube comes into the plant in totes and is already partially diluted. The operators then set the peristaltic pump at each of the three die lube delivery station to further dilute the lubricant/water mixture. In practice compliance is verified by taking a sample that is drawn in equal parts from all three blending stations. This sample is sent to a lab monthly. The last sample showed an aggregated dilution ratio of 312.5:1.

7. There have been incidents of the doors and windows being left open. According to the Door and Window plan the doors and windows are only to be opened either for material transfer or to control the temperature for the safety of the employees. Jennifer Hamill the compliance engineer for the DNR will be following up this area of non-compliance and conduct a more thorough investigation and resolution of this issue.

## **RECOMMENDATIONS/CONCLUSIONS**

There are two area of non-compliance. The first, the under reporting of chlorine and HCl emissions has been corrected. The second issue of open doors and window still has to be resolved. Madison Kipp is meeting the other requirements of their permit.

### **SAFETY EQUIPMENT REQUIRED TO GAIN ACCESS TO SITE:**

☒ HEARING PROTECTION

HARD HAT

☒ SAFETY GLASSES

BOOTS

☐ OTHER (please list)